



Standard Test Method for Performance of Hot Deli Cases¹

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1. Scope

1.1 This test method evaluates the energy consumption and performance of hot deli cases. The food service operator can use this evaluation to select a deli case and understand its energy consumption and performance.

1.2 This test method is applicable to electric, open or closed, hot deli cases.

1.3 The deli case can be evaluated with respect to the following (where applicable):

1.3.1 Energy input rate (10.2),

1.3.2 Energy and temperature at the minimum setting (10.3),

1.3.3 Energy and temperature at the maximum setting (10.3),

1.3.4 Energy and temperature at the manufacturer's recommended setting (10.3),

1.3.5 Holding capacity (10.4),

1.3.6 Holding temperature calibration (10.4),

1.3.7 Preheat energy rate, (10.5),

1.3.8 Idle energy rate (10.6), and

1.3.9 Holding energy rate (10.7).

1.4 The values stated in inch-pound units are to be regarded as standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

A 36/A 36M Specification for Carbon Structural Steel²

3. Terminology

3.1 *calibrated temperature, n*—temperature setting at which the lowest temperature of the water in the holding pans is at $152 \pm 2^\circ\text{F}$.

3.2 *capacity, n*—the amount of $\frac{1}{6}$ size containers the deli case will hold in a single layer at one time.

3.3 *deli case, n*—an appliance designed for the display of hot food product.

3.4 *energy input rate, n*—peak rate at which a deli case consumes energy (Btu/h or kW), typically reflected during preheat.

3.5 *factory setting, n*—recommended control setting by the manufacturer.

3.6 *holding energy rate, n*—average rate of energy consumption (Btu/h or kW) during the holding energy tests.

3.7 *holding energy, n*—energy consumed by the deli case as it is used to hold cooked food product under full load conditions.

3.8 *idle energy rate, n*—the rate of energy consumed (Btu/h or kW) by the deli case while “holding” or idling the heated surface at the thermostat set point.

3.9 *maximum setting, n*—setting at which maximum surface temperature is achieved.

3.10 *minimum setting, n*—setting at which minimum surface temperature is achieved.

3.11 *preheat energy, n*—amount of energy consumed by the deli case while preheating the heated surface from ambient room temperature ($75 \pm 5^\circ\text{F}$) to a temperature at the calibrated setting.

3.12 *preheat rate, n*—average rate ($^\circ\text{F}/\text{min}$) at which the deli case's holding surface is heated from ambient temperature ($75 \pm 5^\circ\text{F}$) to holding temperature with the thermostat set to the calibrated setting.

3.13 *preheat time, n*—time required for the deli case to preheat from ambient room temperature ($75 \pm 5^\circ\text{F}$) to the calibrated setting.

3.14 *uncertainty, n*—measure of systematic and precision errors in specified instrumentation or measure of repeatability of a reported test result.

4. Summary of Test Method

4.1 The deli case is connected to the appropriate metered energy source, and energy input rate is determined to confirm that the appliance is operating within 5 % of the nameplate energy input rate.

¹ This test method is under the jurisdiction of ASTM Committee F26 on Food Service Equipment and is the direct responsibility of Subcommittee F26.06 on Productivity and Energy Protocol.

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² *Annual Book of ASTM Standards*, Vol. 01.04.